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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,210	08/16/2001	Gordon Wesley Braudaway	YOR919960153US4	3310

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EXAMINER

JOHNS, ANDREW W

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/931,210	Applicant(s) BRAUDAWAY ET AL.	
	Examiner Andrew W. Johns	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/14/05, 11/28/05, 1/29/06.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-46, 48-62 and 64-90 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☒ Claim(s) 12, 16, 18-44, 51-56, 58, 59, 68-73, 75-80 and 84-90 is/are allowed.
 6) ☒ Claim(s) 1, 5-7, 13-15, 45, 46, 48-50, 60-62, 64-67 and 81-83 is/are rejected.
 7) ☒ Claim(s) 2-4, 8-10, 17, 57 and 74 is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 23 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 14 October 2005 have been fully considered but they are not persuasive.

With respect to the rejection under 35 U.S.C. § 112, second paragraph, applicant argues that the amendments to the claims resolves all the issues and overcomes this rejection. However, no amendment have been presented with respect to the issues pointed out in claims 45 or 67, and so the rejection of these claims under 35 U.S.C. § 112, second paragraph is maintained.

With respect to the rejection of claims 5-7, 13, 46, 48, 61-62 and 81 as being anticipated by Braudaway et al. '759 under 35 U.S.C. § 102(e), while applicant quotes the previous office action in detail, and has inserted an number of statements that read "In response applicants state that," these statement are not followed by any arguments pointing out any alleged errors in the grounds of rejection set forth in the previous action. Because applicant's response does not provide any such argument, this grounds of rejection is maintained.

With respect to the rejection of claims 64-66 under 35 U.S.C. § 102(e) as anticipated by Wang '086, applicant argues that if a blurring filter were applied to a halftone image as in the present invention, the method of Wang '086 would be rendered ineffective. However, while this might be true, applicant has failed to clearly point out how the *claimed* invention distinguishes from Wang '086. Specifically, each element of claims 64-66 has been mapped to elements of Wang '086 in the grounds of rejection, and applicant has failed to point out any errors in this analysis of the claim language and/or prior art. Since applicant has not specifically identified any claim language nor showed how the prior art elements identified in the rejection are not equivalent to those stipulated by the claimed invention, applicant's arguments are not persuasive

in showing that the invention, as defined by the language of claims 64-66, is not anticipated by Wang '086.

With respect to the obviousness-type double patenting rejection of claims 5 and 61 based upon claim 2 of Braudaway '759, applicant argues that the '759 patent is directed towards a visible watermark, while the instant invention is directed towards an invisible watermark. However, neither claim 5 nor claim 61 includes any language that defines the watermark as being invisible, so that these claims do not define subject matter that is not patentably distinct from that claimed in the '759 patent.

With respect to the obviousness-type double patent rejections in general, applicant expresses some confusion regarding the obviousness statements presented in the previous action. As a clarification, it is noted that the claims of the instant application are generally anticipated by the claims of the various commonly-owned patents, in that every limitation of the instant claims is variously set forth in the patented claims. Because anticipation is the ultimate or epitome of obviousness (see *In re Kalm* 154 USPQ 10 (CCPA 1967), *In re Dailey* 178 USPQ 293 (CCPA 1973), and *In re Pearson* 181 USPQ 641 (CCPA 1974)), the instant claims are obvious in view of the patented claims *because* they are anticipated, and none of the claims in the instant application includes any language that precludes the possibility of the additional features stipulated in the claims of the patents.

Claim Rejections - 35 U.S.C. § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 45 and 67 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 45, the recitation of “said pixel” at line 7 is ambiguous because it is unclear which of the previously recited “plurality of pixels” is referred to by this recitation. In addition, the recitation of “said brightness data” at line 12 is indefinite because none of the preceding claim language recites or defines any such brightness data, so that it is unclear what data is referred to and further defined by this recitation. It is suggested that amending claim 45 to incorporate changes corresponding to those made in claim 1 would resolve these issues.

The recitation of “the step of aligning” at line 1 of claim 67 is ambiguous, because it is unclear which recitation of the parent claim this language is meant to refer to and further define. Specifically, claim 15 recites “aligning” at line 9 (step(b)) and at line 16 (step (e)), so that the further limitation of claim 67 cannot be clearly understood.

Claim Rejections - 35 U.S.C. § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 5-7, 13, 46, 48, 61-62 and 81 are rejected under 35 U.S.C. § 102(e) as being anticipated by Braudaway et al. ‘759 (US 5,530,759 A).

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. § 102(e). This rejection under 35 U.S.C. § 102(e) might be overcome either by a showing under 37 C.F.R. § 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 C.F.R. § 1.131.

With respect to claim 5, Braudaway et al. ‘759 teaches a method for imparting a watermark onto a digitized image (column 1, lines 7-9) comprising the steps of providing said digitized image comprising a plurality of pixels (column 4, lines 10-12), wherein each of said pixels includes brightness data that represents a brightness of at least one color (column 4, lines 60-66; each pixel represents the brightness of at least one and up to three colors); and altering said brightness data associated with a plurality of said pixels (column 6, lines 38-40) maintaining the hue and saturation of said pixel (column 1, lines 66-67; the watermarking preserves the chromaticities of the original image; column 3, lines 65-66; the color components can represent intensity/saturation/hue, so that preserving the chromaticities inherently requires maintaining the hue and saturation components).

Furthermore, Braudaway et al. ‘759 teaches a computer program product comprising a computer useable medium having computer readable program code means embodied therein (114 in Figure 1) for causing a watermark to be imparted into an image, the computer readable program code means in said computer program product comprising computer program code means (column 4, lines 21-22 and 30-37) for causing a computer to effect the steps of providing said digitized image comprising a plurality of pixels (column 4, lines 10-12), wherein each of said pixels includes brightness data that represents a brightness of at least one color (column 4,

lines 60-66; each pixel represents the brightness of at least one and up to three colors); and altering said brightness data associated with a plurality of said pixels (column 6, lines 38-40) maintaining the hue and saturation of said pixel (column 1, lines 66-67; the watermarking preserves the chromaticities of the original image; column 3, lines 65-66; the color components can represent intensity/saturation/hue, so that preserving the chromaticities inherently requires maintaining the hue and saturation components), as further stipulated by claim 46.

In addition, Braudaway et al. '759 also teaches that the image has a plurality of rows and columns of pixels (column 4, lines 10-11; the image is generated by scanning photographs or paintings, and therefore is inherently a two-dimensional array having plural rows and columns) having at least one brightness (column 4, lines 60-66), and that the altering includes adding to or subtracting from the brightness value of a pixel (column 6, lines 58-60) a different small random number (column 5, lines 41-47) corresponding to that pixel, as further required by claim 6; and that the amount added to or subtracted from the image is proportional to the original pixel brightness (i.e., a scaling factor; column 6, lines 57-58), as defined in claim 7. Finally, Braudaway et al. '759 further teaches an apparatus for imparting a watermark on to a digitized image, comprising mechanisms for performing the methods of claims 5 and 6 (shown generally in Figure 1, for example), as variously stipulated by claims 61 and 62.

With respect to claim 13, Braudaway et al. '759 teaches a method for generating a watermarked image (column 1, lines 7-9), the method comprising imparting a watermark onto a digitized image having a plurality of original pixels, each of said pixels having at least one original pixel brightness value (column 4, lines 60-66); providing said digitized watermarking plane comprising a plurality of watermarking elements (column 4, lines 52-55), each element having a watermark brightness multiplying factor (column 5, lines 6-15) and having a one-to-one

positional correspondence with said original pixels (column 5, lines 8-10 and 12-14; the watermark “pixels” correspond to pixels in the original image); and producing a watermarked image by multiplying said original brightness of each of said original pixels by said brightness multiplying factor of a corresponding one of said watermark elements (column 6, line 7).

Furthermore, Braudaway et al. ‘759 teaches a computer program product comprising a computer useable medium having computer readable program code means embodied therein (114 in Figure 1) for causing generation of a watermarked image, the computer readable program code means in said computer program product comprising computer program code means (column 4, lines 21-22 and 30-37) for causing a computer to effect the steps of imparting a watermark onto a digitized image having a plurality of original pixels, each of said pixels having at least one original pixel brightness value (column 4, lines 60-66); providing said digitized watermarking plane comprising a plurality of watermarking elements (column 4, lines 52-55), each element having a watermark brightness multiplying factor (column 5, lines 6-15) and having a one-to-one positional correspondence with said original pixels (column 5, lines 8-10 and 12-14; the watermark “pixels” correspond to pixels in the original image); and producing a watermarked image by multiplying said original brightness of each of said original pixels by said brightness multiplying factor of a corresponding one of said watermark elements (column 6, line 7). Finally, Braudaway et al. ‘759 further teaches an apparatus for generating a watermarked image, comprising mechanisms for performing the method of claim 13 (shown generally in Figure 1, for example), as further stipulated by claim 81.

6. Claims 64-66 are rejected under 35 U.S.C. § 102(e) as being anticipated by Wang ‘086 (US 6,263,086 B1).

Wang '086 teaches a method for detecting a watermark in a marked image (Abstract, lines 1-3), said method comprising providing said marked image having said watermark (S1100 in Figure 7); processing the marked image and producing a screened image (2412 in Figure 5; which is part of the global autocorrelation S1200); altering the screened marked image employing a blurring filter in producing a filtered image (i.e., determining the mean (average) values; 2434 in Figure 6; which is a part of piecewise autocorrelation S1500); and employing a watermark detection method upon said filtered image to detect said watermark (S1700 in Figure 7), as variously required by claims 64 and 65. Furthermore, Wang '086 also teaches producing a derivative image y screening, printing and scanning the marked image (column 3, lines 30-46), as further required by claim 66.

Because the priority applications do not include any disclosure describing the use of the blurring filter stipulated by these claims, the priority applications do not meet the requirements of 35 U.S.C. § 112, first paragraph, in that they fail to show that applicant was in possession of the invention now claimed at the time the parent priority applications were filed. Therefore, claims 64-66, which each variously requires the blurring filter, are not entitled to the benefit of the filing date of the priority applications, and the effective filing date for these claims is considered to be 16 August 2001.

Double Patenting

7. Claim 57 objected to under 37 C.F.R. § 1.75 as being a substantial duplicate of claim 52.¹ When two claims in an application are duplicates or else are so close in content that they both

¹ The dependency of claim 57 has been modified in the most recent version of the claims, without being marked up to indicate the change. In the amendment of 24 June 2004, claim 57 was amended to be dependent from claim 40, rather than claim 39. However, the most recent version of the claims (submitted 29 January 2006) shows claim 57 as again dependent from claim 39, and therefore identical to claim 52.

cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See M.P.E.P. § 706.03(k).

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 C.F.R. § 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 C.F.R. § 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 C.F.R. § 3.73(b).

9. Claims 5 and 61 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 5,530,759 to Braudaway et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because the invention defined by the instant claims would have been obvious to one of ordinary skill in the art in view of the claims of the '759 patent. Specifically, claim 2 of the '759 patent imparts a watermark onto a digitized image (see the preamble of claim 1, from which claim 2 depends) by providing a digitized image (line 3 of claim 1 in the '759 patent) comprised of a plurality of pixels (while not explicitly defined in the claims of the '759 patent, a digital image implies a plurality of pixels defining the content of the image), wherein each of said pixels includes brightness data that represents a brightness of at least one color (line 6 of claim 1 and line 5 of claim 2 in the '759 patent; the pixels of the image represent brightness and color); and altering said brightness data associated with a plurality of said pixels ("modifying the

corresponding pixel of the original image by changing the brightness”; see the ‘759 patent, claim 2, lines 4-5) maintaining the hue and saturation of said pixel (‘759 patent, lines 5-6, “without changing the chromaticities”; one of ordinary skill in the art would recognize that hue and saturation represent the chromaticity of the image, so that not changing the chromaticity requires maintaining hue and saturation). While claim 2 of the ‘759 patent includes additional features or limitations not stipulated by claim 5 of the instant application, the use of the transitional term “comprising” in the instant claim fails to preclude the presence of the additional features, so that the instant claim is broadly encompassed by claim 2 of the ‘759 patent, and the two claims are not patentably distinct. In addition, an apparatus with mechanisms for implementing the method of claim 2 in the ‘759 patent would have been readily apparent to one of ordinary skill in the art, so that the invention defined by claim 61 in the instant application would have been obvious to one of ordinary skill in view of claim 2 in the ‘759 patent.

10. Claims 1, 13-14, 45, 48-49, 60 and 81-82 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 18 and 21 of U.S. Patent No. 5,825,892 to Braudaway et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because the invention defined by the claims of the ‘892 patent (as set forth in the Reexamination Certificate) broadly encompass or suggest each of the limitations of the instant claims. Specifically, with respect to claims 1 and 13 of the instant application, claim 18 of the ‘892 patent defines a digitized image having a plurality of pixels representing brightness values (preamble of claim 13 in the ‘892 patent, from which claim 18 depends), the pixels having at least one color component (i.e., red, green, or blue; claim 18 of the ‘892 patent), a digitized watermark plane with a plurality of watermark elements having a one-to-one correspondence with the pixels of the digitized image (first element of claim 13 in the

'892 patent) and multiplying the brightness data of each pixel by a corresponding multiplying factor from the watermarking plane (second element in claim 13 of the '892 patent), said watermark having an invisibility classification (last line in claim 13 of the '892 patent), so that claims 1 and 13 of the instant application are not patentably distinct from claim 18 of the '892 patent. Similarly, claim 21 of the '892 patent defines substantially similar limitations to claim 14 of the instant application, except that claim 21 of the '892 patent stipulates that the watermarking plane include a plurality of elements each having a brightness *multiplying* value, while claim 14 of the instant application requires that these elements be brightness *adding or subtracting* values. However, it is a well established mathematical principle that an adjustment of a value by a multiplying factor can also be accomplished by adding or subtracting an appropriate percentage value that corresponds to the multiplying factor. Therefore, it would have been readily obvious to one of ordinary skill in the art that the adding or subtracting factors of the instant claims could be substituted for the multiplying factor of the patented claims. Therefore the invention defined by claim 14 in the instant application would have been obvious to one of ordinary skill in the art. Furthermore, the implementation of the invention defined in the claims of the '892 patent using apparatus and/or computer program code would have been readily apparent to one of ordinary skill in the art, so that the invention variously defined in claims 45, 48-49, 60 and 81-82 of the instant application is also not patentably distinct from that set forth in claims 18 and 21 of the '892 patent.

11. Claims 15, 50 and 83 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 17 of U.S. Patent No. 6,577,744 to Braudaway et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because the invention defined by the claims of the instant application

would have been obvious to one of ordinary skill in the art in view of the invention defined by the claims in the '744 patent. Specifically, each of the limitations of claims 15 and 50 of the instant application is substantially identically set forth in claims 1 and 17 of the '744 patent, except that the patent stipulates that the watermarking plane include a plurality of elements each having a brightness *multiplying* value, while the claims of the instant application requires that these elements be brightness *adding and/or subtracting* values. However, it is a well established mathematical principle that an adjustment of a value by a multiplying factor can also be accomplished by adding or subtracting an appropriate percentage value that corresponds to the multiplying factor. Therefore, it would have been readily obvious to one of ordinary skill in the art that the adding or subtracting factors of the instant claims could be substituted for the multiplying factor of the patented claims. Therefore the invention defined by claims 15 and 50 in the instant application would have been obvious to one of ordinary skill in the art in view of claims 1 and 17 of the '744 patent. Furthermore, the implementation of the invention defined in the claims of the '744 patent using an apparatus would have been readily apparent to one of ordinary skill in the art, so that the invention variously defined in claim 83 of the instant application is also not patentably distinct from that set forth in claims 1 and 17 of the '744 patent.

Allowable Subject Matter

12. Claims 12, 16, 18-44, 51-56, 58-59, 68-73, 75-80 and 84-90 are allowed.
13. Claims 2-4 and 8-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. Claim 67 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

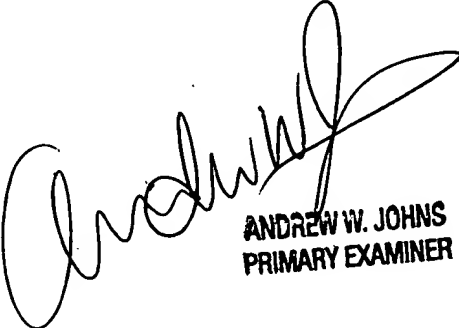
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 C.F.R. § 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Johns whose telephone number is (571) 272-7391. The examiner is normally available Monday through Friday, at least during the hours of 9:00 am to 3:00 pm Eastern Time. The examiner may also be contacted by e-mail using the address: andrew.johns@uspto.gov. (Applicant is reminded of the Office policy regarding e-mail communications. See M.P.E.P. § 502.03)

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Matt Bella, can be reached at (571) 272-7778. The fax phone number for this division is (571) 273-8300. In order to ensure prompt delivery to the examiner, all unofficial communications should be clearly labeled as "Draft" or "Unofficial."

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center Receptionist whose telephone number is (571) 272-2600.

A. Johns
17 February 2006



ANDREW W. JOHNS
PRIMARY EXAMINER